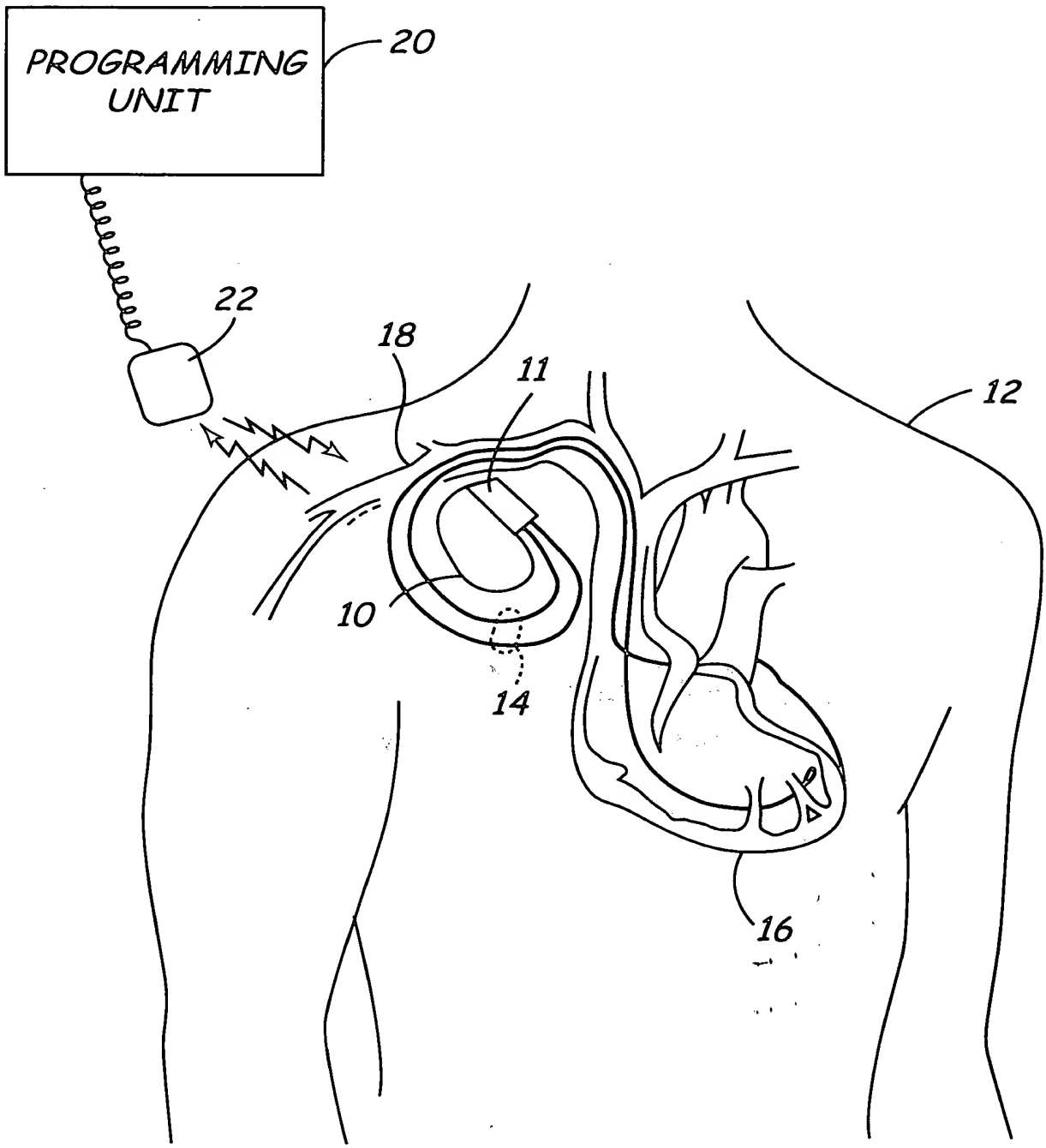

FIG. 1

2/8

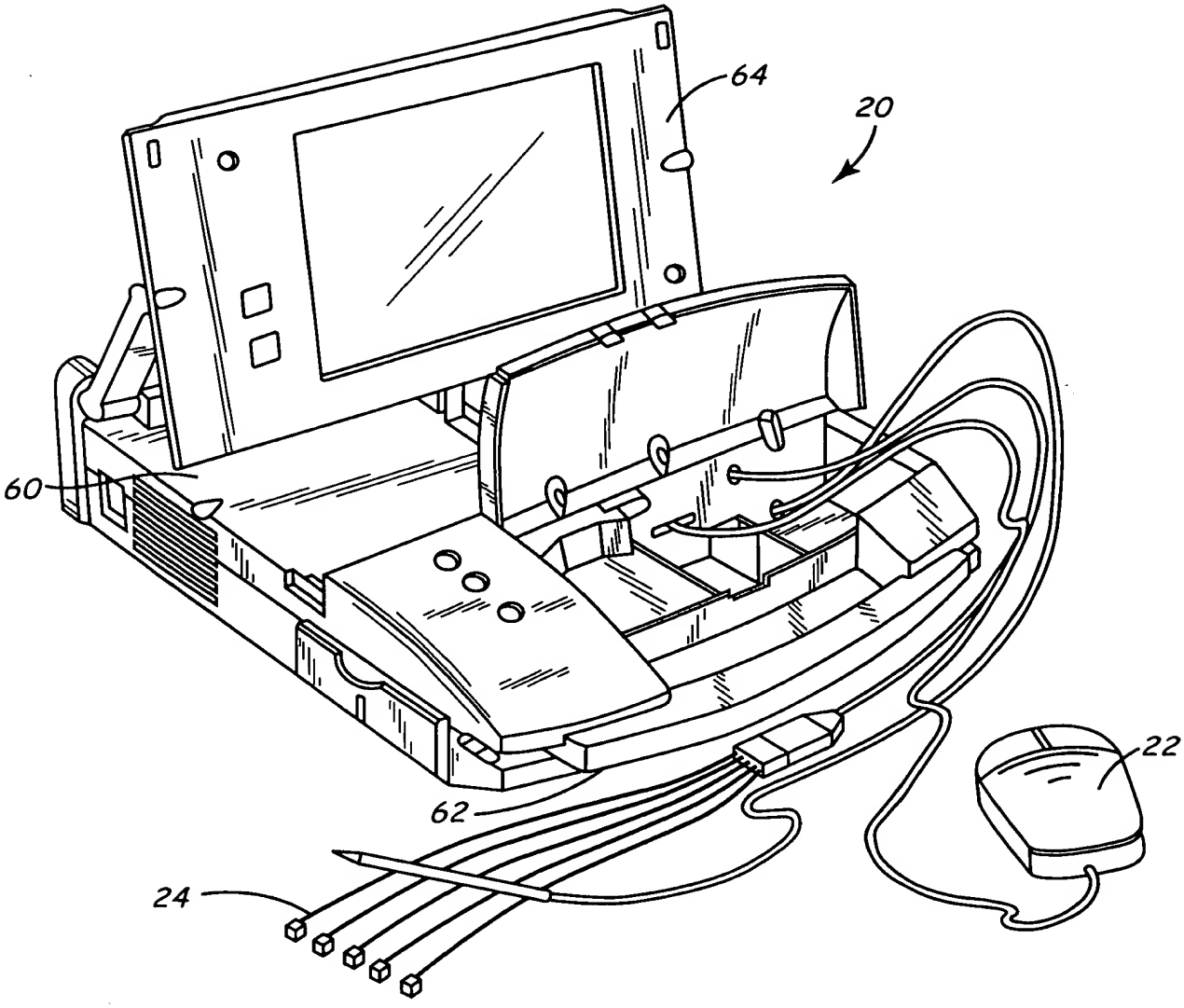

FIG. 2

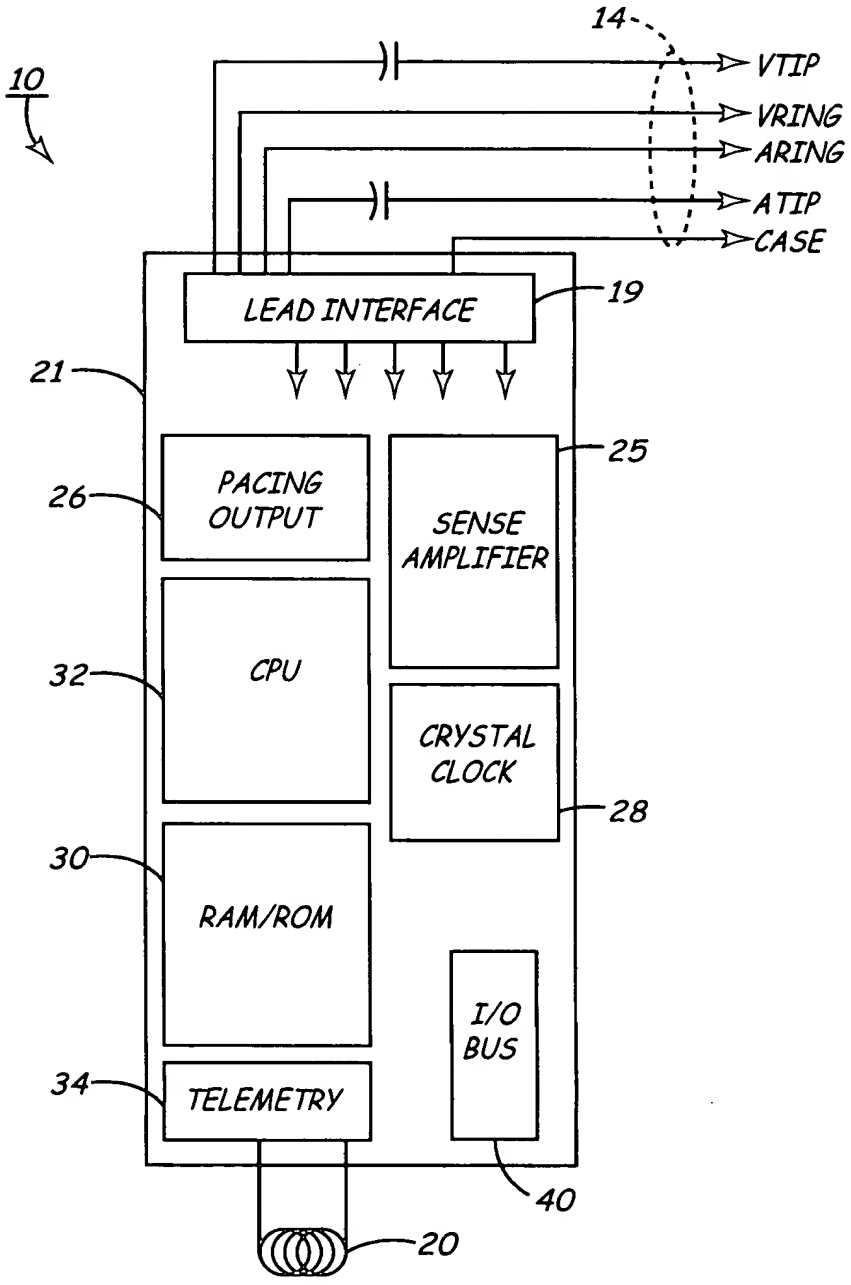
14
10
VTIP
VRING
ARING
ATIP
CASE
LEAD INTERFACE
19
21
PACING OUTPUT
26
25
SENSE AMPLIFIER
CPU
32
CRYSTAL CLOCK
28
30
RAM/ROM
I/O BUS
34
TELEMETRY
40
20

FIG. 3

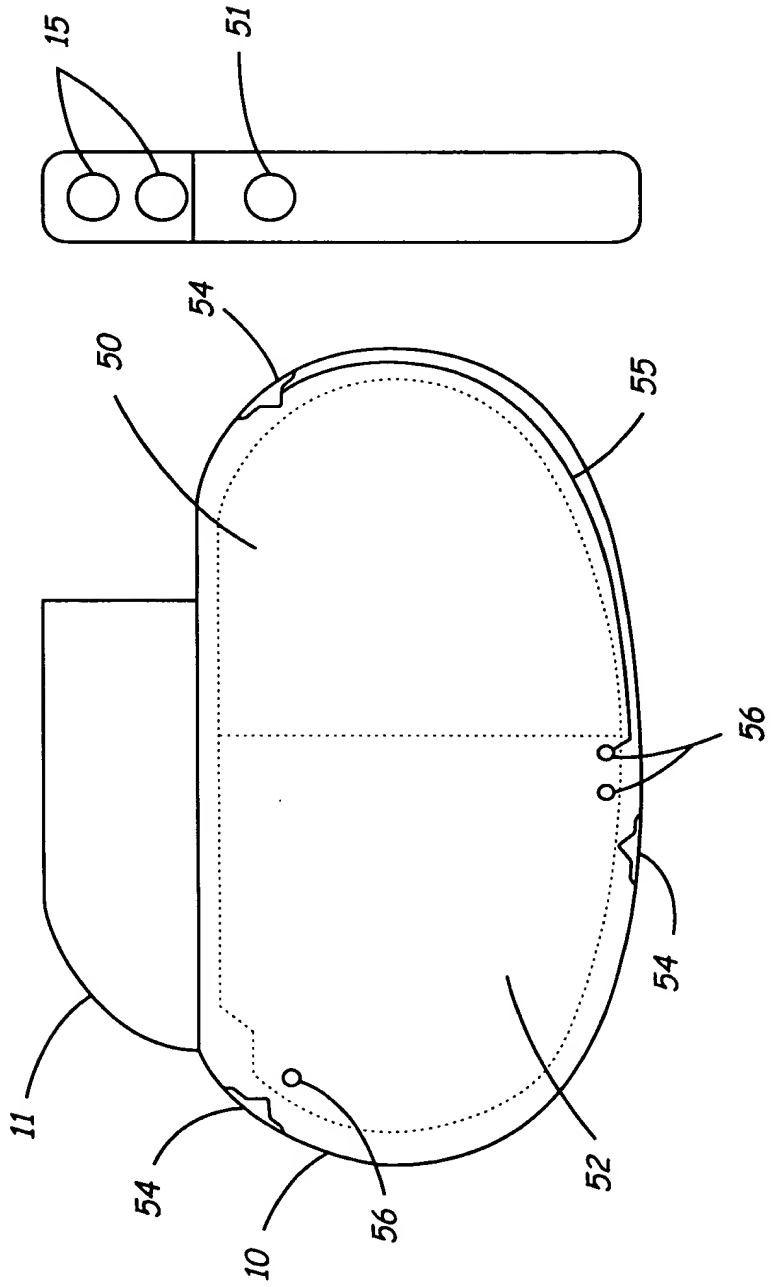

FIG. 4

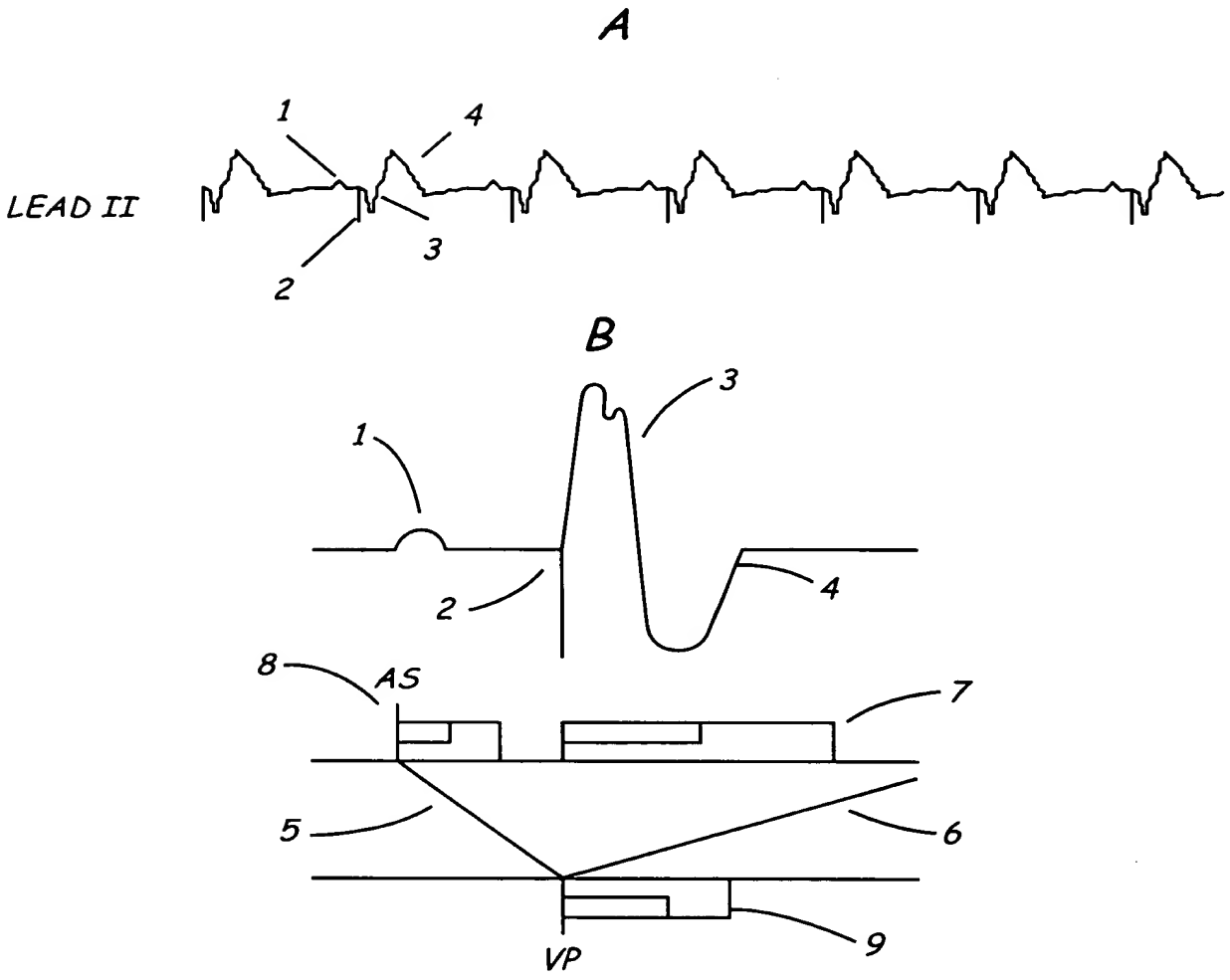

FIG. 5

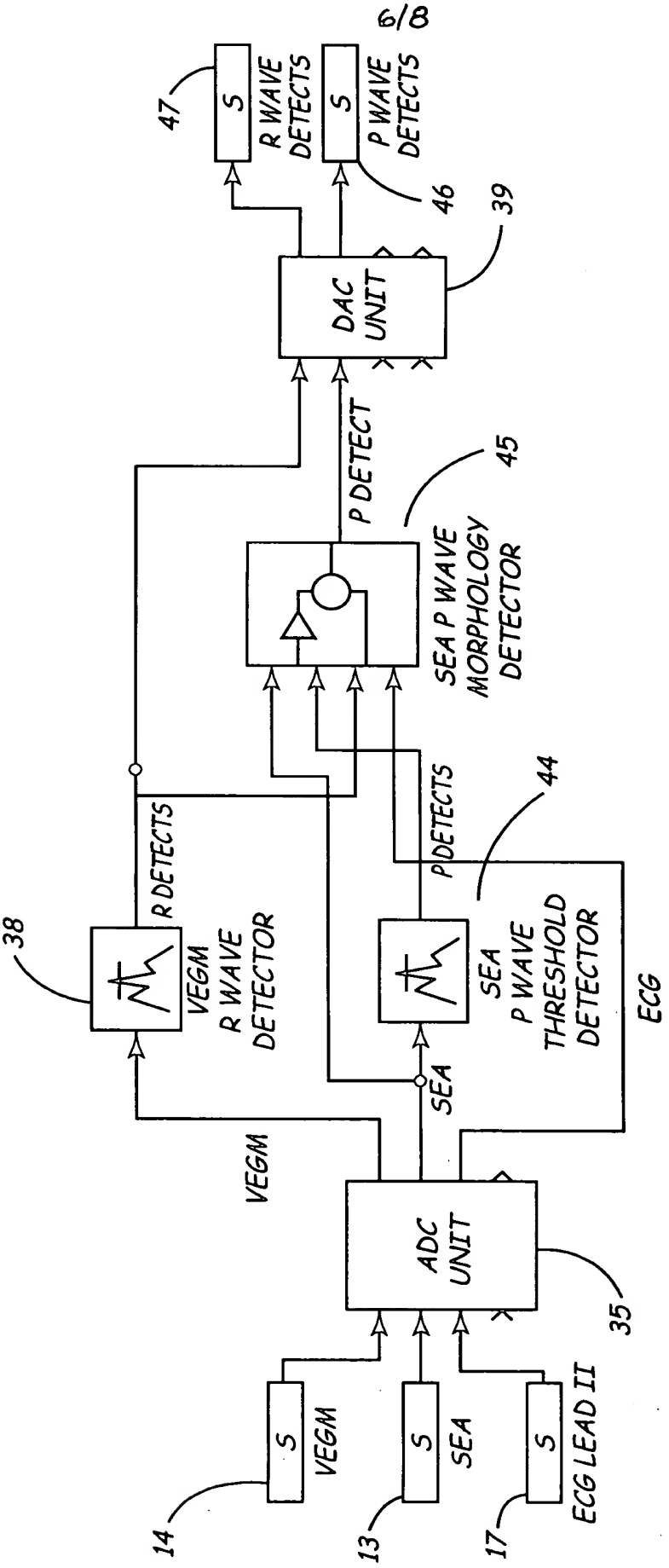
47
S
R WAVE DETECTS
S
P WAVE DETECTS
46
39
DAC UNIT
P DETECT
45
SEA P WAVE MORPHOLOGY DETECTOR
R DETECTS
P DETECTS
44
38
VEGM R WAVE DETECTOR
SEA P WAVE THRESHOLD DETECTOR
ECG
SEA
VEGM
ADC UNIT
35
S
VEGM
S
SEA
S
ECG LEAD II
14
13
17

FIG. 6

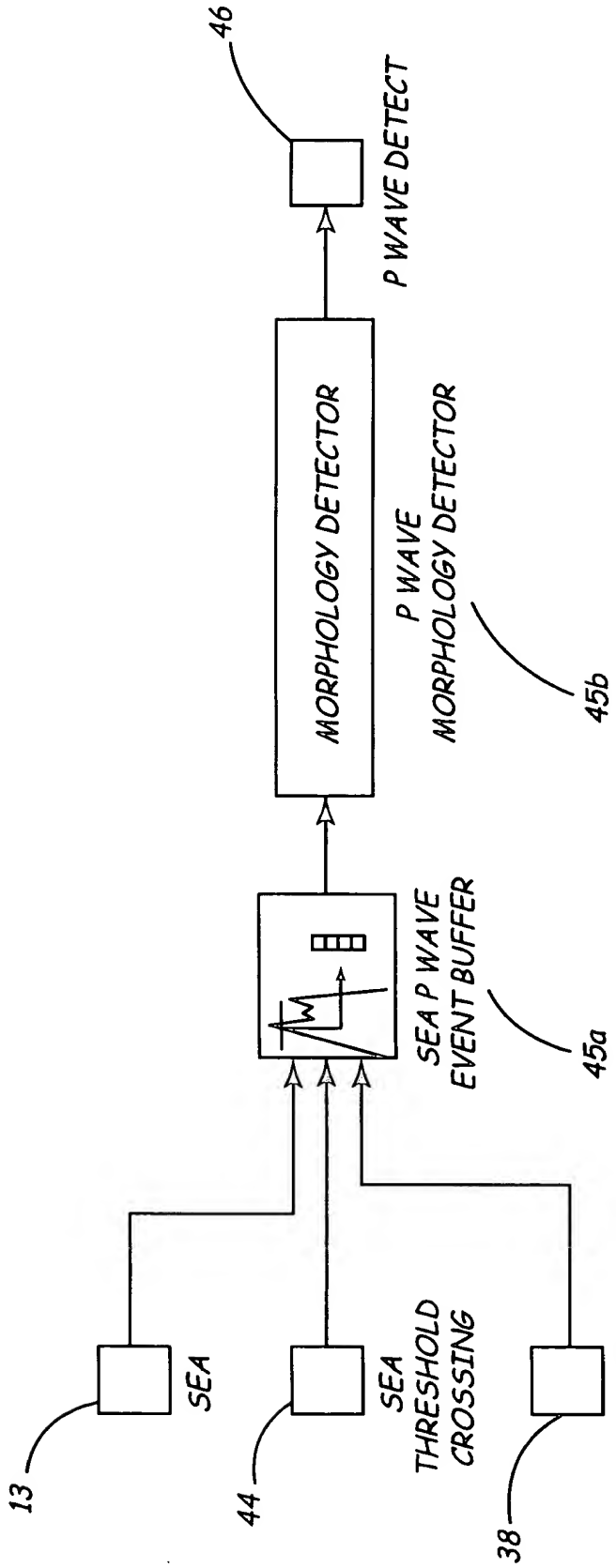
46
P WAVE DETECT
MORPHOLOGY DETECTOR
P WAVE MORPHOLOGY DETECTOR
45b
SEA P WAVE EVENT BUFFER
45a
13
SEA
44
SEA THRESHOLD CROSSING
38
R WAVE IN PRXCHK INTERVAL

FIG. 7

PATIENT	INDICATION	CROSSBLANKING + THRESHOLD		CROSSBLANKING + THRESHOLD + P-WAVE WIDTH	
		Sp	Pp	Sp	Pp
302	AV BLOCK III	49.1	90.0	43.5	95.0
303	AV BLOCK III	55.3	96.6	53.4	100
309	AV BLOCK III	28.5	51.5	31.8	98.3
310	AV BLOCK III	67.6	96.0	58.5	98.8
311	SSS	89.6	98.7	86.9	100
315	SSS	92.6	97.1	92.2	100
318	2:1 AV BLOCK	80.7	88.3	78.7	100
323	AV BLOCK III	41.8	93.8	32.2	100
TOTAL		68.1	90.7	64.8	99.6

SP = SENSITIVITY = # TRUE POSITIVES / # P-WAVES X 100
Pp = POSITIVE SENSITIVITY =# TRUE POSITIVES / (# TRUE POSITIVES + FALSE POSITIVES) X 100

TABLE 1

FIG. 8

MEDTRONIC, INC.
ATRIAL AWARE VVI – A METHOD FOR ATRIAL SYNCHRONOUS VENTRICULAR (VDDR) PACING USING THE SUBCUTANEOUS ELECTRODE ARRAY AND A STANDARD PACING LEAD
APPLICANT: Panken et al. SERIAL NO.: 09/736,840
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